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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,843	05/19/2000	PIERRE NICAISE	35615.180	3718

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EXAMINER

KNEPPER, DAVID D

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 07/08/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/554,843

Applicant(s)

NICAISE, PIERRE

Examiner

David D. Knepper

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Applicant's correspondence filed on 19 May 2000 (IDS, paper #4) has been received and considered. Claims 1-10 are pending.

Title

2. The title is objected to because it fails to give a meaningful description of the coding process.

Drawings

3. The drawings are objected to because figures 1 and 4 they fail to include descriptive words or abbreviations in the blocks. Thus, the reader may not easily view the drawings and have an indication of the subject matter therein. Correction is required.

Specification

4. The disclosure is objected to because of the following informalities: the applicant did not use headings in the specification.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program

listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Also, page 1a does not make any sense as stated in the specification and should be deleted. The transition from page 1 to page 2 is ruined by the improper insertion of what appears to be negative comments about prior art. The relationship of page 1a (as written) to the instant invention is not clear because it fails to point out any specific relationship. The comment that it is a response to the first written opinion is not proper because this is a US application.

Appropriate correction is required.

Claims

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 8 and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Roucos (Speaker Normalization Algorithms for Very-Low-Rate Speech Coding), Fette (4,707,858) or Taguchi (4,701,955).

All 3 reference match some patterns to input speech forming code words upon which the claims read. Roucos teaches the use of differences, page 1.1.1, bottom left. Fette measures changes based on thresholds in column 3 and also teaches the well-known AMDF (Absolute magnitude Difference Function). Taguchi teaches changes in LSP parameters (see figures 1A, 1B and columns 4-5. These are all used to form codewords for transmission on which the claims read.

Claim 3: The use of amplitudes of the acoustic unit is taught by all 3 references: Roucos's templages, page 1.1.2; Fette's words, abstract and Taguchi's feature vector, abstract.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-7 are rejected under 35 U.S.C. § 103 as being unpatentable over Roucos, Fette or Taguchi.

It is noted that the prior art does not use identical terminology but would have been obvious to one of ordinary skill in the art that the broad terms would read on those utilized by the prior art noted above as explained below. However, Official Notice is taken that these are all common calculations in speech signal processing. Examples are noted below from the art.

Claims 2, 3: "Spectra of lines of frequencies, weighting coefficients normed with respect to the energy and integrated into the secondary code word" is taught by Roucos's segment vocoder and speaker normalization (page 1.1.1-1.1.2); Taguchi's LSP coefficients (col. 3), weighting coefficient W and his pattern memories 512, 513 (figure 5) using one or more codes representing changes as also illustrate in figures 1A, 1B as noted above (see also column 14) or Fette's LPC reflection coefficients, Eigenvectors, and composite statistics (column 5).

Claim 4: Coding amplitude extremes is taught by Roucos's formants, page 1.1.1 which are amplitude peaks shown by Fette's big spectral change and significantevents of figure 6 and shown in figures 1A and 1B of Taguchi.

Claim 5: Limiting the calculations of difference to a single average spectrum is considered obvious in view of the Roucos's weighted mean u_x

Claim 6: limiting the frequency to 3 bands is obvious in view of Roucos's reference to second and third formants, page 1.1.1, because one of ordinary skill in the art knows that it is common knowledge that vowel sounds can be distinguished with only 3 formants.

Claim 7: The use of a single coefficient for each band is typical for LPC which represent the vocal tract and pitch, see Taguchi, column 8 (see also his phoneme and pitch codes).

9. Claim 10 are rejected under 35 U.S.C. § 103 as being unpatentable over Roucos, Fette or Taguchi further in view of Zehave (5,581,575).

It is noted that Roucos, Fette or Toguch do not teach the combination including facsimile. However, Fette suggests it in column1, lines 14-15 with his many types of transmission media, such as telephone lines and the like. Zehavi explicitly teaches the use of facsimile in column 5, line 28-29, 50-51 where he teaches that the combination is possible with any data transmitter.

Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dreyfus (3,946,157) is cited to show that matching speech sounds to input speech is well known.

Cutler (5,440,562) is cited to indicate that it is well known to combine speech coding with facsimile technology for transmission.

11. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

TC2600 Fax Center
(703) 872-9314

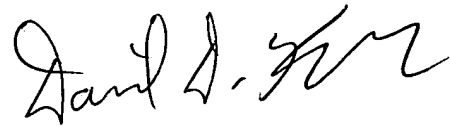
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Knepper whose telephone number is (703) 305-9644.

The examiner can normally be reached on Monday-Thursday from 07:30 a.m.-6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold, can be reached on (703) 305-4379.

Any inquiry of a general nature or relating to the status of this application should be directed to customer service whose telephone number is (703) 306-0377.



David D. Knepper
Primary Examiner
Art Unit 2654
June 30, 2003